

## CLAIM AMENDMENTS

1           1. (currently amended) A layer sequence or structure  
2 comprising ~~a sequence of layers disposed one on another with:~~  
3           a first highly doped  $n_a$ -GaAs layer ~~[(3)]~~;  
4           a graded layer ~~[(5)]~~ of AlGaAs on the first ~~[[ly]]~~  
5 highly doped layer ~~(3)~~ whereby the and having an aluminum  
6 concentration ~~of this layer that~~ diminishes, starting from ~~[[the]]~~  
7 a boundary surface with the first highly doped layer, in the  
8 direction of ~~[[the]]~~ an opposite boundary surface of the AlGaAs  
9 layer ~~[(5)]~~; ~~[[and]]~~  
10           a second highly doped  $n^+$ -layer ~~(7)~~, ~~characterized in~~  
11 that; and  
12           on at least one boundary layer of the AlGaAs layer  
13 ~~[(5)]~~ an undoped intermediate layer ~~[(4,6)]~~ juxtaposed with the  
14 respective highly doped layer ~~(3,7)~~ is provided.

1           2. (currently amended) A layer sequence or structure in  
2 accordance with claim 1, ~~characterized in that~~ wherein the undoped  
3 intermediate layer is composed of GaAs ~~[(4,6)]~~.

1           3. (currently amended) A layer sequence or structure in  
2 accordance with claim 1 ~~characterized in that~~ wherein GaAs is the  
3 material for the second highly doped  $n^+$ -layer ~~[(7)]~~.

1           4. (currently amended) The layer sequence according  
2 to claim 1 ~~characterized in that~~ wherein silicon or tellurium is  
3 the doping substance.

1           5. (currently amended) The layer sequence or structure  
2 according to claim 1 ~~characterized in that~~ wherein the layer  
3 sequence ~~e (3, 4, 5, 6, 7)~~ is arranged on further layers  $[(1,$   
4  $2)]$ .

1           6. (currently amended) The layer sequence or structure  
2 according to claim 1 ~~characterized in that~~ wherein the layer  
3 sequence  $[(3, 4, 5, 6, 7)]$  is disposed on a  $n^-$ -GaAs layer  
4  $[(2)]$ .

1           7. (currently amended) The layer sequence of claim 6,  
2 ~~characterized in that~~ wherein the  $n^-$ -GaAs layer  $[(2)]$  is disposed  
3 on a highly doped  $n^+$ -layer ~~(1)~~, especially of GaAs.

1           8. (currently amended) The layer sequence or structure  
2 according to claim 1, ~~characterized in that~~ wherein the first  
3 highly doped  $n_d$ -GaAs layer ~~(3)~~ and/ or the second highly doped  $n^+$ -  
4 layer  $[(7)]$  are doped with up to  $10^{18} \text{ cm}^{-3}$  silicon.

1           9. (currently amended) A method of making a layer  
2     sequence or structure, the method comprising ~~[[with]]~~ the steps of:  
3           providing a first highly doped  $n_a$ -GaAs layer (3, 7) is  
4     ~~disposed on as~~ a substrate having a pair of opposite boundary  
5     surfaces,  
6           forming on one of the boundary surfaces of the first  
7     highly doped GaAs layer ~~[[ (3, 7) ]]~~ an underdoped undoped GaAs layer  
8     ~~(4, 6) is arranged and epitaxied~~ epitaxiing the underdoped GaAs  
9     layer at an appropriate temperature,  
10          providing on the underdoped undoped GaAs layer (4, 6) a  
11     graded AlGaAs layer ~~(5) is disposed; and~~  
12          providing on the other of the boundary surfaces a second  
13     undoped GaAs layer and epitaxiing the second undoped GaAs layer at  
14     an appropriate temperature.

10. (canceled)

1           11. (currently amended) ~~[[A]]~~ The method according to  
2     claim 9, ~~characterized in that further comprising the step of~~  
3           providing a further highly doped GaAs layer (3, 7) is  
4     ~~disposed on the second undoped GaAs layer~~ [[ (4, 6) ]].

1           12. (currently amended) A layer sequence or structure  
2 comprising ~~a series of layers disposed one on another with~~  
3 a first highly doped layer,  
4 a graded layer arranged on the first highly doped layer,  
5 a second highly doped layer, and ~~characterized in that~~  
6 on at least one boundary surface of the graded layer an  
7 undoped intermediate layer ~~is arranged and juxtaposed with one of~~  
8 the highly doped layers.